

1 CLAIMS

I claim:

1.

5 In combination with an enclosure having a pair of end walls, a pair of side walls,  
and a roof, comprising:

a dual fuel gas turbine in said enclosure;

said gas turbine including a circumferential array of combustors;

10 each of said combustors having a gaseous fuel line and a liquid fuel line in  
communication therewith for supplying either gaseous fuel or liquid fuel thereto;

each of said liquid fuel lines having a check valve imposed therein which is open when  
said gas turbine is being fueled with liquid fuel and which is closed when said gas  
turbine is being fueled with gaseous fuel;

15 an air blower having an inlet end and an air discharge end;

said air inlet end of said air blower being in communication with ambient air outside of  
the enclosure;

20 and a cooling air conduit having an air inlet end in operative communication with said  
discharge end of said air blower and an air discharge end which directs ambient  
air onto at least some of said check valves to cool the same.

2.

The combination of claim 1 wherein said cooling air conduit comprises an air  
manifold which supplies ambient air onto a plurality of check valves.

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3.

The combination of claim 1 wherein a fire damper door selectively closes said air inlet end of said air conduit.

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4.

The combination of claim 3 wherein said door is pivotally mounted at said air inlet end and is movable between open and closed positions.

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5.

The combination of claim 3 wherein said air plenum is mounted over said door to enclose the same and wherein said air blower is mounted on said air plenum so that said discharge end of said air blower is in communication with the interior of said air plenum.

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6.

The combination of claim 5 wherein said air plenum has an access door provided therein to permit access to said door.

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7.

The combination of claim 4 wherein a solenoid actuator is connected to said door for pivotally moving said door.

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8.

The combination of claim 2 wherein said air manifold includes a pair of air inlet ends which are positioned in opposite walls of the enclosure and wherein an air blower is operatively connected to each of said air inlet ends.

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The combination of claim 8 wherein said air manifold includes a plurality of pipes which extend to said check valves.

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The combination of claim 9 wherein said air discharges ends of said pipes at least partially surround said check valves.

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11.

In combination with an enclosure, comprising:

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a dual fuel gas turbine in said enclosure;

said gas turbine including a circumferential array of combustors;

each of said combustors having a gaseous fuel line and a liquid fuel line in communication therewith for supplying either gaseous fuel or liquid fuel thereto;

each of said liquid fuel lines having a check valve imposed therein which is open when said gas turbine is being fueled with liquid fuel and which is closed when said gas turbine is being fueled with gaseous fuel;

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an air blower having an air inlet end and an air discharge end;

said air inlet end of said air blower being in communication with ambient air outside of the enclosure;

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an air manifold positioned within said enclosure and having at least one air inlet end which is in communication with said air discharge end of said air blower;

1 said air manifold having a plurality of pipes, having air discharge ends, which extend to  
at least some of said check valves so that ambient air from said air blower is  
directed onto said check valves to cool the same.

12.

5 The combination of claim 11 wherein the enclosure includes walls and wherein  
said air manifold includes a pair of air inlet ends positioned in the walls of the enclosure.

13.

10 The combination of claim 11 wherein a fire damper door selectively closes said  
air inlet end of said air manifold.

14.

The combination of claim 12 wherein a fire damper door selectively closes each  
of said air inlet ends of said air manifold.

15.

15 The combination of claim 14 wherein said air plenum is mounted over said door  
to enclose the same and wherein said air blower is mounted on said air plenum so that  
said discharge end of said air blower is in communication with the interior of said air  
plenum.

20 16.

The combination of claim 15 wherein said air plenum has an access door  
provided therein to permit access to said door.

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17.

The combination of claim 11 wherein said air discharge ends of said pipes at least partially surround said check valves.

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In combination with a dual fuel gas turbine positioned within an enclosure, the gas turbine including a circumferential array of combustors; each of the combustors having a gaseous fuel line and a liquid fuel line in communication therewith for supplying either gaseous fuel or liquid fuel thereto; each of the liquid fuel lines having a check valve imposed therein which is open when the gas turbine is being fueled with liquid fuel and which is closed when the gas turbine is being fueled with gaseous fuel, comprising:

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a cooling air conduit having an air inlet end in communication with a source of forced ambient air outside of the enclosure and an air discharge end which directs ambient air onto at least some of the check valves to cool the same.

19.

The combination of claim 18 wherein said source of forced ambient air comprises an air blower.

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20.

The combination of claim 18 wherein said cooling air conduit comprises an air manifold which supplies forced ambient air onto a plurality of check valves.

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21.

The combination of claim 18 wherein a fire damper door selectively closes said air inlet end of said air conduit.

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22.

The combination of claim 21 wherein said door is pivotally mounted at said air inlet end and is movable between open and closed positions.

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23.

The combination of claim 22 wherein a solenoid actuator is connected to said door for pivotally moving said door.

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24.

The combination of claim 22 wherein said air plenum is mounted over said door to enclose the same and wherein said air blower is mounted on said air plenum so that said discharge end of said air blower is in communication with the interior of said air plenum.

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25.

The combination of claim 24 wherein said air plenum has an access door provided therein to permit access to said door.

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26.

The combination of claim 20 wherein said air manifold includes a pair of air inlet ends which are positioned in opposite walls of the enclosure and wherein each of said air inlet ends is in communication with an air blower.

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27.

The combination of claim 20 wherein said air manifold includes a plurality of pipes which extend to the check valves.

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28.

The combination of claim 27 wherein said air discharges ends of said pipes at least partially surround the check valves.

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29.

The method of cooling a liquid fuel check valve of a dual fuel gas turbine positioned in an enclosure, comprising the steps of:

providing an air inlet opening in the enclosure;

providing an air conduit means having air inlet and air discharge ends;

providing a source of forced cooling air;

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connecting said air inlet end of said air conduit means to said source of forced cooling air;

positioning said air discharge end of said air conduit means with respect to said check valve so that the cooling air being discharged from said air discharge end of said air conduit means will pass over said check valve to cool the same.

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The method of claim 29 wherein the source of forced cooling air comprises an air blower.

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